

SUBSTITUTE SPECIFICATION

Fig. 3 illustrates an embodiment of a method for adjusting (shimming) the magnetic field strength in accordance with the invention, using a number of magnetically conducting or permanently magnetic bolts.

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Fig. 4 is a side view, partly in section, of a further embodiment of a static magnetic field generator of a magnetic resonance imaging apparatus in accordance with the present invention, wherein the magnet is divided into columns respectively having different magnetic energy levels.

Fig. 5 is a sectional view of the apparatus of Fig. 4, in a plane proceeding perpendicularly to the vertical dot-dash axis shown in Fig. 4.

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DESCRIPTION OF THE PREFERRED EMBODIMENTS

Fig. 1 shows shimming rings of the upper and lower poles of a C-type magnet. The apparatus has a press plate and a magnetic field generating source 10, having permanently magnetic columns 1. A number of magnetically conducting or permanently magnetic bolts 11 are movable up and down at external edge of the magnetic field source in Fig. 1 so as to achieve the above-mentioned adjustable effect.

Fig. 2 is an enlargement of the portion marked in a circle in Fig. 1, showing the permanent magnetic source 1, the pole plate 2, the pole plate 3 after cutting processing, another pole plate 4, the first shimming ring 5, the second shimming ring 6 with an adjusting means, the gradient coil 7 and the RF emitting coil 8. In accordance with the invention shimming ring 6 has been added in addition to the original shimming ring 5. In Fig. 2, the outer diameter of the upper shimming ring 5 is the same as that of the lower shimming ring 6. The inner diameter of shimming ring 6 is larger than that of the shimming ring 5, so the space that is smaller than the inner diameter of shimming ring 6 and that is under the shimming ring 5 can be used for fixing the gradient coil 7. The lower end face of the shimming ring 6 does not extend or project below the lower plane of the transmitting coil 8. Similarly, the two shimming rings of the lower pole plate 4 are located at the position that corresponds to the position in the upper plate 2, so the